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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,345	09/11/2003	Duncan Missimer	003.P001NP	8036

43831 7590 03/06/2007

BERKELEY LAW & TECHNOLOGY GROUP, LLP
1700 NW 167TH PLACE
SUITE 240
BEAVERTON, OR 97006

EXAMINER	
GOODCHILD, WILLIAM J	
ART UNIT	**PAPER NUMBER**
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,345	MISSIMER ET AL.	
	Examiner	Art Unit	
	William J. Goodchild	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09/11/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-100* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-100* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/11/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Application filed on 09/11/2003.

Drawings

2. The drawings are objected to because:

Figures 3, 5, 7 refer to an output 'B', but there is not an input 'B' labeled, according to the specification, the examiner believes that it should be into item 520 on figure 5.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Abstract

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. The abstract of the disclosure is objected to because the abstract does not disclose what is new in the art or what the improvement relates to.

Correction is required. See MPEP § 608.01(b).

Specification

5. The disclosure is objected to for the following informalities:

Page 1 shows the inventors names, page 1 should start with "RELATED APPLICATION", as the inventors names are not required on the specification.

Page 2, line 3 of "RELATED APPLICATION" has a blank line where the number of the "U. S. provisional application number" should be.

Page 6, line 7, the phrase "this is not agreement on the amount of data to accept; and/or" is unclear, and should be replaced with –there is not agreement on the amount of data to accept; and/or—.

Page 12, line 18, the phrase "Embodiment 700 includes mirroring device 710, initiator 710 and targets…", show both "mirroring device" as item 710 and the "initiator" as item 710.

Appropriate correction is required.

Claim Objections

6. Claims 1-49, 51-54 and 56-100 are objected to for the following informalities:

Claim 1, line 3, the phrase "multiple targets" has been defined in claim 1, line 1, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 2, line 1, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 2, line 1, the phrase "multiple targets" has been defined in claim 1, line 1, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 2, line 2, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 3, line 2, the phrase "a request" has been defined in claim 1, line 1, it is unclear if this is the same request or a new request.

Claim 3, line 2, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 4, line 1, the phrase "a request" has been defined in claim 3, line 2, it is suggested to change the phrase to –the request--, in order to improve the clarity of the claim language.

Claim 4, line 1, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 4, line 3, the phrase "a request" has been defined in claim 1, line 1, it is unclear if this is the same request or a new request.

Claim 5, line 2, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 5, line 2, the phrase "multiple targets" has been defined in claim 1, line 1, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 5, line 2, the phrase "a request" has been defined in claim 1, line 1, it is unclear if this is the same request or a new request.

Claim 6, line 1, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 6, line 1, the phrase "multiple targets" has been defined in claim 1, line 1, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 6, line 2, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 7, line 2, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 7, line 2, the phrase "multiple targets" has been defined in claim 1, line 1, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 7, line 2, the phrase "a request" has been defined in claim 1, line 1, it is unclear if this is the same request or a new request.

Claim 8, line 1, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 8, line 1, the phrase "multiple targets" has been defined in claim 1, line 1, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 8, line 2, the phrase "data" has been defined in claim 1, line 3, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 10, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 11, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 12, line 2, the phrase "of said multiple blocks of data" is unclear in the phrase "if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data".

Claim 16, line 2, the phrase "a write request" is unclear, if this is a new write request or the same write request from claim 12, line 4.

Claim 16, line 3, the phrase "an amount of data" has been defined in claim 12, line 2, it is suggested to change the phrase to –the amount of data--, in order to improve the clarity of the claim language.

Claim 19, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 20, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 21, line 5, the phrase "multiple targets" has been defined in claim 21, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 22, line 3, the phrase "transferring data" has been defined in claim 21, line 5, it is suggested to change the phrase to –transferring the data--, in order to improve the clarity of the claim language.

Claim 22, line 3, the phrase "multiple targets" has been defined in claim 21, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 22, line 3, the phrase "transferring data" has been defined in claim 21, line 5, it is suggested to change the phrase to –transferring the data--, in order to improve the clarity of the claim language.

Claim 23, line 2, the phrase "a request" is unclear, if this is a new request or the same request from claim 21, line 4.

Claim 23, line 3, the phrase "data" has been defined in claim 21, line 5, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 24, line 3, the phrase "a request" is unclear, if this is a new request or the same request from claim 21, line 4.

Claim 24, line 3, the phrase "data" has been defined in claim 21, line 5, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 24, line 4, the phrase "a request" is unclear, if this is a new request or the same request from claim 21, line 4.

Claim 25, line 3, the phrase "data" has been defined in claim 21, line 5, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 25, line 3, the phrase "multiple targets" has been defined in claim 21, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 25, line 3, the phrase "a request" is unclear, if this is a new request or the same request from claim 21, line 4.

Claim 26, line 3, the phrase "transferring data" has been defined in claim 21, line 5, it is suggested to change the phrase to –transferring the data--, in order to improve the clarity of the claim language.

Claim 26, line 3, the phrase "multiple targets" has been defined in claim 21, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 26, line 3, the phrase "transferring data" has been defined in claim 21, line 5, it is suggested to change the phrase to –transferring the data--, in order to improve the clarity of the claim language.

Claim 27, line 3, the phrase "data" has been defined in claim 21, line 5, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 27, line 3, the phrase "multiple targets" has been defined in claim 21, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 27, line 3, the phrase "a request" is unclear, if this is a new request or the same request from claim 21, line 4.

Claim 28, line 3, the phrase "transferring data" has been defined in claim 21, line 5, it is suggested to change the phrase to –transferring the data--, in order to improve the clarity of the claim language.

Claim 28, line 3, the phrase "multiple targets" has been defined in claim 21, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 28, line 3, the phrase "transferring data" has been defined in claim 21, line 5, it is suggested to change the phrase to –transferring the data--, in order to improve the clarity of the claim language.

Claim 29, line 5, the phrase "of said multiple blocks of data" is unclear in the phrase "if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data".

Claim 33, line 3, the phrase "a write request" is unclear, if this is a new write request or the same write request from claim 29, line 6.

Claim 33, line 4, the phrase "an amount of data" has been defined in claim 29, line 4, it is suggested to change the phrase to –the amount of data--, in order to improve the clarity of the claim language.

Claim 35, line 2, the phrase "of said multiple blocks of data" is unclear in the phrase "if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data".

Claim 39, line 2, the phrase "a write request" is unclear, if this is a new write request or the same write request from claim 35, line 4.

Claim 42, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 43, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 44, line 5, the phrase "of said multiple blocks of data" is unclear in the phrase "if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data".

Claim 48, line 3, the phrase "a write request" is unclear, if this is a new write request or the same write request from claim 44, line 6.

Claim 48, line 3, the phrase "a subset" has been defined in claim 44, line 6, it is suggested to change the phrase to –the subset--, in order to improve the clarity of the claim language.

Claim 48, line 4, the phrase "an amount of data" has been defined in claim 44, line 4, it is suggested to change the phrase to –the amount of data--, in order to improve the clarity of the claim language.

Claim 51, line 2, the phrase "data" has been defined in claim 50, line 7, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 52, line 2, the phrase "data" has been defined in claim 50, line 7, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 53, line 2, the phrase "data" has been defined in claim 50, line 7, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 53, line 2, the phrase "multiple targets" has been defined in claim 50, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 53, line 2, the phrase "a request" is unclear, if this is a new request or the same request from claim 50, line 4.

Claim 54, line 2, the phrase "data" has been defined in claim 50, line 7, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 54, line 2, the phrase "multiple targets" has been defined in claim 50, line 3, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 54, line 2, the phrase "a request" is unclear, if this is a new request or the same request from claim 50, line 4.

Claim 56, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 57, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 58, line 3, the phrase "a second switched", it is suggested to change the phrase to –a second switch--, in order to improve the clarity of the claim language.

Claim 59, line 5, the phrase "of multiple blocks of data" is unclear in the phrase "if said multiple targets do not satisfy an amount of data to be transferred of multiple blocks of data".

Claim 63, line 2, the phrase "a write request" is unclear, if this is a new write request or the same write request from claim 59, line 8.

Claim 63, line 3, the phrase "an amount of data" has been defined in claim 59, line 4, it is suggested to change the phrase to –the amount of data--, in order to improve the clarity of the claim language.

Claim 66, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 67, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 68, line 8, the phrase "multiple targets" has been defined in claim 68, line 4, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 68, line 8-9, the phrase "the minimum acceptable data transfer" should be changed to –a minimum acceptable data transfer--, as this limitation has not been previously recited in the claim.

Claim 69, line 2, the phrase "data" has been defined in claim 68, line 8, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 70, line 2, the phrase "a request" is unclear, if this is a new request or the same request from claim 68, line 5.

Claim 70, line 2, the phrase "data" has been defined in claim 68, line 8, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 71, line 2, the phrase "data" has been defined in claim 68, line 8, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 71, line 2, the phrase "multiple targets" has been defined in claim 68, line 8, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 71, line 2, the phrase "a request" is unclear, if this is a new write request or the same request from claim 68, line 5.

Claim 72, line 2, the phrase "data" has been defined in claim 68, line 8, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 72, line 2, the phrase "multiple targets" has been defined in claim 68, line 8, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 72, line 2, the phrase "a request" is unclear, if this is a new write request or the same request from claim 68, line 5.

Claim 74, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 75, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 76, line 7, the phrase "of multiple blocks of data" is unclear in the phrase "if said multiple targets do not satisfy an amount of data to be transferred of multiple blocks of data".

Claim 80, line 2, the phrase "a write request" is unclear, if this is a new write request or the same write request from claim 76, line 10.

Claim 80, line 3-4, the phrase "an amount of data" has been defined in claim 76, line 6, it is suggested to change the phrase to –the amount of data--, in order to improve the clarity of the claim language.

Claim 83, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 84, line 12, the phrase "to multiple targets" has been defined in claim 84, line 8, it is suggested to change the phrase to –to the multiple targets--, in order to improve the clarity of the claim language.

Claim 84, line 12-13, the phrase "the minimum acceptable data transfer" should be changed to –a minimum acceptable data transfer--, as this limitation has not been previously recited in the claim.

Claim 85, line 2, the phrase "data" has been defined in claim 84, line 12, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 86, line 2, the phrase "a request" is unclear, if this is a new write request or the same request from claim 84, line 9.

Claim 86, line 2, the phrase "data" has been defined in claim 84, line 12, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 87, line 2, the phrase "data" has been defined in claim 84, line 12, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 87, line 2, the phrase "multiple targets" has been defined in claim 84, line 8, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 87, line 2, the phrase "a request" is unclear, if this is a new write request or the same request from claim 84, line 9.

Claim 88, line 2, the phrase "data" has been defined in claim 84, line 12, it is suggested to change the phrase to –the data--, in order to improve the clarity of the claim language.

Claim 88, line 2, the phrase "multiple targets" has been defined in claim 84, line 8, it is suggested to change the phrase to –the multiple targets--, in order to improve the clarity of the claim language.

Claim 88, line 2, the phrase "a request" is unclear, if this is a new write request or the same request from claim 84, line 9.

Claim 90, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 91, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 92, line 10, the phrase "of multiple blocks of data" is unclear in the phrase "if said multiple targets do not satisfy an amount of data to be transferred of multiple blocks of data".

Claim 96, line 2, the phrase "a write request" is unclear, if this is a new write request or the same write request from claim 92, line 13.

Claim 99, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Claim 100, line 2, the phrase "the fibre channel protocol" should be changed to –a fibre channel protocol--, as this limitation has not been previously recited in the claim.

Appropriate correction is required.

Any claim not specifically addressed above, is being objected to as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-100 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent claim 1 is drawn towards a method comprising: transferring data if a condition is met. In order for a method claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the method claimed; transferring data if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the data.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 2-11, which are dependent on claim 1, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 12 is drawn towards a method comprising: transmitting a write request if a condition is met. In order for a method claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the method claimed; transmitting a write request if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the request.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 13-20, which are dependent on claim 12, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 21 is drawn towards a system comprising: a storage medium and transferring data if a condition is met. In order for a system claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the system claimed; a storage medium and transferring data if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the transferred data.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 22-28, which are dependent on claim 21, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 29 is drawn towards a system comprising: a storage medium and transferring data if a condition is met. In order for a system claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the system claimed; a storage medium and transferring data if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the transferred data.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 30-34, which are dependent on claim 29, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 35 is drawn towards a method comprising: mirroring multiple blocks of data and transmitting a write request if a condition is met. In order for a method claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the method claimed; mirroring multiple blocks of data and transmitting a write request if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the mirrored data or the transmitted request.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 36-43, which are dependent on claim 35, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 44 is drawn towards a system comprising: mirroring multiple blocks of data and transmitting a write request if a condition is met. In order for a system claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the system claimed; mirroring multiple blocks of data and transmitting a write request if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the mirrored data or the transmitted request.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 45-49, which are dependent on claim 44, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 50 is drawn towards a machine comprising: a port, a mirroring device, logic and the mirroring device adapted to transfer data if a condition is met. In order for a machine claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the machine claimed; a port, a mirroring device, logic and the mirroring device adapted to transfer data does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the system.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 51-58, which are dependent on claim 50, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 59 is drawn towards a machine comprising: a port, a mirroring device, logic and the mirroring device adapted to transfer data. In order for a machine claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the machine claimed; a port, a mirroring device, logic and the mirroring device adapted to transfer data does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the system.

Claims 60-67, which are dependent on claim 59, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 68 is drawn towards a machine comprising: a first switch, a second switch, a port, logic and the mirroring device adapted to transfer data if a condition is met. In order for a machine claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the machine claimed; a first switch, a second switch, a port, logic and the mirroring device does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the system.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 69-75, which are dependent on claim 68, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 76 is drawn towards a system comprising: a first switch, a second switch, a port, a mirroring device capable of mirroring data if a condition is met, logic and the mirroring device being adapted to transmit a write request. In order for a system claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the system claimed; a first switch, a second switch, a port, a mirroring device capable of mirroring data if a condition is met, logic and the mirroring device being adapted to transmit a write request does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the system.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 77-83, which are dependent on claim 76, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 84 is drawn towards a system comprising: a host, a storage unit, a first switch, a second switch, a port, logic and a mirroring device adapted to transfer data if a condition is met. In order for a system claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the system claimed; a host, a storage unit, a first switch, a second switch, a port, logic and

a mirroring device adapted to transfer data if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the system.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 85-91, which are dependent on claim 84, do not add any tangible results to the claim, and thus are rejected for the same reason.

Independent claim 92 is drawn towards a system comprising: a host, a storage unit, a first switch, a second switch, a port, logic and a mirroring device capable of mirroring data if a condition is met. In order for a system claim to be statutory, it must result in useful, concrete, and tangible results. In this instance there is no result of the system claimed; a host, a storage unit, a first switch, a second switch, a port, logic and a mirroring device capable of mirroring data if a condition is met does not result in any real world change as it does not create a tangible result specifying what is an output or stored result of the system.

In addition, if the condition is not met, there is no result or usefulness of the claim.

Claims 93-100, which are dependent on claim 92, do not add any tangible results to the claim, and thus are rejected for the same reason.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-100 are rejected under 35 U.S.C. 102(e) as being anticipated by Ibrahim et al. (US Patent No. 6,880,062).

In reference to claim 1, Ibrahim et al. teaches a method comprising:

mirroring data to multiple targets where the targets request different data lengths, comprising, (column 7, lines 34-47, Transfer Ready Response's from each target may state different data amounts for each storage unit):

transferring data to multiple targets, if an acceptable data transfer of said multiple targets is greater than 0, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's).

In reference to claim 2, Ibrahim et al. teaches the method of claim 1 wherein:

transferring data to multiple targets comprises:

transferring data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 3, Ibrahim et al. teaches the method of claim 1 further comprising:

not acting upon a request to transfer data if the request does not raise the acceptable data transfer by said multiple targets, (column 7, lines 34-47, If m or n equal 0, then no data will be sent).

In reference to claim 4, Ibrahim et al. teaches the method of claim 3 wherein:

not acting upon a request to transfer data comprises:

not acting upon a request if the request does not raise the acceptable data transfer by all targets, (column 7, lines 34-47, If m or n are not increased to an acceptable level, then no data will be sent).

In reference to claim 5, Ibrahim et al. teaches the method of claim 3 further comprising:

transferring data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 6, Ibrahim et al. teaches the method of claim 5 wherein:

transferring data to multiple targets comprises:

transferring data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 7, Ibrahim et al. teaches the method of claim 1 further comprising:

transferring data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 8, Ibrahim et al. teaches the method of claim 7 wherein:

transferring data to multiple targets comprises:

transferring data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 9, Ibrahim et al. teaches the method of claim 1 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 10, Ibrahim et al. teaches the method of claim 1 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 11, Ibrahim et al. teaches the method of claim 1 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 12, Ibrahim et al. teaches a method comprising:

mirroring multiple blocks of data to multiple targets, if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data, comprising:

transmitting a write request for half of said multiple blocks of data to said multiple targets, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 13, Ibrahim et al. teaches the method of claim 12 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 14, Ibrahim et al. teaches the method of claim 12 further comprising:

transferring to said multiple targets, half of said multiple blocks of data, if said multiple targets satisfy said request for half of said multiple blocks of data, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal

acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 15, Ibrahim et al. teaches the method of claim 14 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 16, Ibrahim et al. teaches the method of claim 12 wherein:

16. The method of claim 12, and further comprising:

transmitting a write request for half of an amount of an immediately previous write request, if said multiple targets do not satisfy an amount of data to be transferred of said immediately previous write request, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 17, Ibrahim et al. teaches the method of claim 16 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 18, Ibrahim et al. teaches the method of claim 12 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 19, Ibrahim et al. teaches the method of claim 12 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 20, Ibrahim et al. teaches the method of claim 12 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 21, Ibrahim et al. teaches a method comprising:

a storage medium having stored thereon instructions, that, when executed, result in performance of a method of mirroring data to multiple targets where the targets request different data lengths, comprising, (column 3, lines 16-25, the storage processor, item 110, processes the storage commands):

transferring data to multiple targets, if an acceptable data transfer of said multiple targets is greater than 0, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's).

In reference to claim 22, Ibrahim et al. teaches the method of claim 21 wherein:

transferring data to multiple targets comprising transferring data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 23, Ibrahim et al. teaches the method of claim 21 wherein:

not acting upon a request to transfer data if the request does not raise the acceptable data transfer by said multiple targets, (column 7, lines 34-47, If m or n equal 0, then no data will be sent).

In reference to claim 24, Ibrahim et al. teaches the method of claim 23 wherein:

not acting upon a request to transfer data comprising not acting upon a request if the request does not raise the acceptable data transfer by all targets, (column 7, lines 34-47, If m or n equal 0, then no data will be sent).

In reference to claim 25, Ibrahim et al. teaches the method of claim 23 wherein:

transferring data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 26, Ibrahim et al. teaches the method of claim 25 wherein:

transferring data to multiple targets comprising transferring data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 27, Ibrahim et al. teaches the method of claim 21 wherein:

transferring data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 28, Ibrahim et al. teaches the method of claim 27 wherein:

transferring data to multiple targets comprising transferring data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 29, Ibrahim et al. teaches a method comprising:

a storage medium having stored thereon instructions, that, when executed, result in performance of a method of mirroring multiple blocks of data to multiple targets, if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data, comprising, (column 3, lines 16-25, the storage processor, item 110, processes the storage commands):

transmitting a write request for half of said multiple blocks of data to said multiple targets, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 30, Ibrahim et al. teaches the system of claim 29 further result in:

said multiple targets comprising all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 31, Ibrahim et al. teaches the system of claim 29 further result in:

transferring to said multiple targets, half of said multiple blocks of data, if said multiple targets satisfy said request for half of said multiple blocks of data, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 32, Ibrahim et al. teaches the system of claim 31 wherein:

said multiple targets comprising all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 33, Ibrahim et al. teaches the system of claim 29 wherein:

transmitting a write request for half of an amount of an immediately previous write request, if said multiple targets do not satisfy an amount of data to be transferred of said immediately previous write request, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 34, Ibrahim et al. teaches the system of claim 33 wherein:

said multiple targets comprising all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 35, Ibrahim et al. teaches a method comprising:

mirroring multiple blocks of data to multiple targets, if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data, comprising:

transmitting a write request for a subset of said multiple blocks of data to said multiple targets, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80; m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 36, Ibrahim et al. teaches the method of claim 35 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 37, Ibrahim et al. teaches the method of claim 35 wherein:

transferring to said multiple targets, said subset of said multiple blocks of data, if said multiple targets satisfy said request for said subset of said multiple blocks of data, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage

and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 38, Ibrahim et al. teaches the method of claim 37 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 39, Ibrahim et al. teaches the method of claim 35 wherein:

transmitting a write request for a further subset of an amount of an immediately previous write request, if said multiple targets do not satisfy an amount of data to be transferred of said immediately previous write request, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 40, Ibrahim et al. teaches the method of claim 39 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 41, Ibrahim et al. teaches the method of claim 35 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 42, Ibrahim et al. teaches the method of claim 35 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 43, Ibrahim et al. teaches the method of claim 35 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 44, Ibrahim et al. teaches a system comprising:

a storage medium having stored thereon instructions, that, when executed, result in performance of a method of mirroring multiple blocks of data to multiple targets, if said multiple targets do not satisfy an amount of data to be transferred of said multiple blocks of data, comprising, (column 3, lines 16-25, the storage processor, item 110, processes the storage commands):

transmitting a write request for a subset of said multiple blocks of data to said multiple targets, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be

sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 45, Ibrahim et al. teaches the method of claim 44 wherein:

said multiple targets comprising all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 46, Ibrahim et al. teaches the method of claim 44 wherein:

transferring to said multiple targets, said subset of said multiple blocks of data, if said multiple targets satisfy said request for said subset of said multiple blocks of data, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 47, Ibrahim et al. teaches the method of claim 46 wherein:

said multiple targets comprising all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 48, Ibrahim et al. teaches the method of claim 44 wherein:

transmitting a write request for a subset of an amount of an immediately previous write request, if said multiple targets do not satisfy an amount of data to be transferred of said immediately previous write request, (column 7, lines 34-47, column 8, lines 9-23, The VSX (mirroring manager), will manage and reduce the write requests until the amount of data that the targets will accept is determined and that amount of data will be sent. If write request equals 80, m=80, n=40, the VSX will initiate a write request for 20, after the data has been written, the VSX will reiterate until all the data is written, this may involve reducing the request to a minimal acceptable value and waiting for a target to be able to accept that minimal acceptable value).

In reference to claim 49, Ibrahim et al. teaches the method of claim 48 wherein:

said multiple targets comprising all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 50, Ibrahim et al. teaches a system comprising:

at least a port for coupling to said switched fabric, (column 3, lines 38-39);

a mirroring device capable of mirroring data to multiple targets where the targets request different data lengths, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's);

logic for signal information to pass at least between said port and said mirroring device, (column 3, lines 22-25, 37-39, storage processor, item 110);

said mirroring device adapted to transfer data to said multiple targets, if an acceptable data transfer of said multiple targets is greater than 0, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's).

In reference to claim 51, Ibrahim et al. teaches the method of claim 50 wherein:

said mirroring device is further adapted to transfer data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 52, Ibrahim et al. teaches the method of claim 50 wherein:

said mirroring device is further adapted to not act upon a request to transfer data if the request does not raise the acceptable data transfer by said multiple targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 53, Ibrahim et al. teaches the method of claim 52 wherein:

said mirroring device is further adapted to transfer data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 54, Ibrahim et al. teaches the method of claim 50 wherein:

said mirroring device is further adapted to transfer data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 55, Ibrahim et al. teaches the method of claim 50 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 56, Ibrahim et al. teaches the method of claim 50 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 57, Ibrahim et al. teaches the method of claim 50 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 58, Ibrahim et al. teaches the method of claim 50 wherein:

said switch comprises a first switch, (column 3, lines 37-38, A switched fabric is where many devices are connected using switches);

and further comprising:

a second switched coupled to said first switch to form a switched fabric, (column 3, lines 37-38, A switched fabric is where many devices are connected using switches).

In reference to claim 59, Ibrahim et al. teaches a system comprising:

at least a port for coupling to said switched fabric, (column 3, lines 38-39);

a mirroring device capable of mirroring multiple blocks of data to multiple targets, if said multiple targets do not satisfy an amount of data to be transferred of multiple blocks of data, (column 4, lines 16-17, 20-21, 35-38, 55-67 and figure 4):

logic for signal information to pass at least between said port and said mirroring device, (column 3, lines 22-25 and 37-39);

said mirroring device being adapted to transmit a write request for a subset of said multiple blocks of data to said multiple targets, (column 6, lines 15-23).

In reference to claim 60, Ibrahim et al. teaches the method of claim 59 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 61, Ibrahim et al. teaches the method of claim 59 wherein:

mirroring device is further adapted to transfer to said multiple targets, said subset of said multiple blocks of data, if said multiple targets satisfy said request for said subset of said multiple blocks of data, (column 6, lines 22-24).

In reference to claim 62, Ibrahim et al. teaches the method of claim 61 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 63, Ibrahim et al. teaches the method of claim 59 wherein:

said mirroring device is further adapted to transmit a write request for a further subset of an amount of an immediately previous write request, if said multiple targets do

not satisfy an amount of data to be transferred of said immediately previous write request, (column 6, lines 48-57, process repeats until all data is sent).

In reference to claim 64, Ibrahim et al. teaches the method of claim 59 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 65, Ibrahim et al. teaches the method of claim 59 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 66, Ibrahim et al. teaches the method of claim 59 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 67, Ibrahim et al. teaches the method of claim 59 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 68, Ibrahim et al. teaches a system comprising:

a first switch, (column 3, lines 37-38);

and a second switch coupled to said first switch, said second switch including, (column 3, lines 37-38):

at least a port, (column 3, lines 38-39);

a mirroring device capable of mirroring data to multiple targets where the targets request different data lengths, (column 4, lines 16-17, 20-21, 35-38, 55-67 and figure 4);

logic for signal information to pass at least between said port and said mirroring device, (column 22-25, 37-39);

said mirroring device adapted to transfer data to multiple targets, if the minimum acceptable data transfer of said multiple targets is greater than 0, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's).

In reference to claim 69, Ibrahim et al. teaches the method of claim 68 wherein:

said mirroring device is further adapted to transfer data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 70, Ibrahim et al. teaches the method of claim 68 wherein:

said mirroring device is further adapted to not act upon a request to transfer data if the request does not raise the acceptable data transfer by said multiple targets, (column 7, lines 34-47, If m or n equal 0, then no data will be sent).

In reference to claim 71, Ibrahim et al. teaches the method of claim 70 wherein:

said mirroring device is further adapted to transfer data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets,

(column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 72, Ibrahim et al. teaches the method of claim 68 wherein:

said mirroring device is further adapted to transfer data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47, When the Target Ready Response by all targets is at an acceptable level, data will then be sent).

In reference to claim 73, Ibrahim et al. teaches the method of claim 68 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 74, Ibrahim et al. teaches the method of claim 68 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 75, Ibrahim et al. teaches the method of claim 68 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 76, Ibrahim et al. teaches a system comprising:

a first switch, (column 3, lines 37-38);

and a second switch coupled to said first switch, said second switch including, (column 3, lines 37-38):

at least a port, (column 3, lines 38-39);

a mirroring device capable of mirroring multiple blocks of data to multiple targets, if said multiple targets do not satisfy an amount of data to be transferred of multiple blocks of data, (column 4, lines 16-17, 20-21, 35-38, 55-67 and figure 4);

logic for signal information to pass at least between said port and said mirroring device, (column 22-25, 37-39);

said mirroring device being adapted to transmit a write request for a subset of said multiple blocks of data to said multiple targets, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's).

In reference to claim 77, Ibrahim et al. teaches the method of claim 76 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 78, Ibrahim et al. teaches the method of claim 76 wherein:

said mirroring device is further adapted to transfer to said multiple targets, said subset of said multiple blocks of data, if said multiple targets satisfy said request for said subset of said multiple blocks of data, (column 6, lines 22-24).

In reference to claim 79, Ibrahim et al. teaches the method of claim 78 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 80, Ibrahim et al. teaches the method of claim 76 wherein:

said mirroring device is further adapted to transmit a write request for a further subset of an amount of an immediately previous write request, if said multiple targets do not satisfy an amount of data to be transferred of said immediately previous write request, (column 6, lines 48-57, process repeats until all data is sent).

In reference to claim 81, Ibrahim et al. teaches the method of claim 76 wherein:

said multiple targets comprises all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 82, Ibrahim et al. teaches the method of claim 76 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 83, Ibrahim et al. teaches the method of claim 76 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 84, Ibrahim et al. teaches a system comprising:

a host, (column 2, line 55);

a physical storage unit, (column 2, lines 54-55);

a first switch, (column 3, lines 37-38); and

a second switch coupled to said first switch and forming a switched fabric, said first switch and said second switch coupled to said host and said physical storage unit, said first switch including, (column 3, lines 37-38):

at least a port, (column 3, lines 38-39);

a mirroring device capable of mirroring data to multiple targets where the targets request different data lengths, (column 3, lines 22-25, column 4, lines 16-17, 20-21, 35-38, 55-67 and figure 4);

logic for signal information to pass at least between said port and said mirroring device, (column 22-25, 37-39);

said mirroring device adapted to transfer data to multiple targets, if the minimum acceptable data transfer of said multiple targets is greater than 0, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's).

In reference to claim 85, Ibrahim et al. teaches the method of claim 84 wherein:

said mirroring device is further adapted to transfer data to all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 86, Ibrahim et al. teaches the method of claim 84 wherein:

said mirroring device is further adapted to not act upon a request to transfer data if the request does not raise the acceptable data transfer by said multiple targets, (column 4, lines 16-17, 20-21, 35-38, 55-67 and figure 4, column 7, lines 34-40).

In reference to claim 87, Ibrahim et al. teaches the method of claim 86 wherein:

said mirroring device is further adapted to transfer data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 7, lines 34-47).

In reference to claim 88, Ibrahim et al. teaches the method of claim 84 wherein:

said mirroring device is further adapted to transfer data to multiple targets if a request for data transfer raises the acceptable data transfer by said multiple targets, (column 6, lines 22-24).

In reference to claim 89, Ibrahim et al. teaches the method of claim 84 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 90, Ibrahim et al. teaches the method of claim 84 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 91, Ibrahim et al. teaches the method of claim 84 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 92, Ibrahim et al. teaches a system comprising:

a host, (column 2, line 55);

a physical storage unit, (column 2, lines 54-55);

a first switch, (column 3, lines 37-38); and

a second switch coupled to said first switch and forming a switched fabric, said first switch and said second switch coupled to said host and said physical storage unit, said first switch including, (column 3, lines 37-38):

at least a port, (column 3, lines 38-39);

a mirroring device capable of mirroring multiple blocks of data to multiple targets, if said multiple targets do not satisfy an amount of data to be transferred of multiple blocks of data, (column 3, lines 22-25, column 4, lines 16-17, 20-21, 35-38, 55-67 and figure 4);

logic for signal information to pass at least between said port and said mirroring device, (column 22-25, 37-39);

said mirroring device being adapted to transmit a write request for a subset of said multiple blocks of data to said multiple targets, (column 7, lines 34-47, VSX 100 determines maximum amount of data that can be sent based on the Transfer Ready Response's from targets, which will be determined from the smallest amount identified by each target in the Transfer Ready Response's).

In reference to claim 93, Ibrahim et al. teaches the method of claim 92 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 94, Ibrahim et al. teaches the method of claim 92 wherein:

said mirroring device is further adapted to transfer to said multiple targets, said subset of said multiple blocks of data, if said multiple targets satisfy said request for said subset of said multiple blocks of data, (column 6, lines 22-24).

In reference to claim 95, Ibrahim et al. teaches the method of claim 94 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 96, Ibrahim et al. teaches the method of claim 92 wherein:

said mirroring device is further adapted to transmit a write request for a further subset of an amount of an immediately previous write request, if said multiple targets do not satisfy an amount of data to be transferred of said immediately previous write request, (column 6, lines 48-57, process repeats until all data is sent).

In reference to claim 97, Ibrahim et al. teaches the method of claim 92 wherein:

said multiple targets comprise all targets, (column 4, lines 28-31, MU, item 120 manages sending data to all available targets).

In reference to claim 98, Ibrahim et al. teaches the method of claim 92 wherein:

at least one of said multiple targets comprises a storage disk, (Figure 1, column 3, lines 1-3, storage elements comprise disk arrays and disks).

In reference to claim 99, Ibrahim et al. teaches the method of claim 92 wherein:

said targets comprise systems that are compliant with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

In reference to claim 100, Ibrahim et al. teaches the method of claim 92 wherein:

said targets comprise systems that are compatible with the fibre channel protocol, (column 2, lines 61-67, host computers and storage devices are configured to work with fibre channel network).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Goodchild whose telephone number is (571) 270-1589. The examiner can normally be reached on Monday - Friday / 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on (571) 272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

William J Goodchild
Examiner
Art Unit 2109

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

WJG
02/28/2007